

Overview of Wisconsin DNR Septage Program

Steve Warrner
*WDNR Wastewater Statewide Site
Review Coordinator*

*Land and Water Conservation Board
August 2, 2022*





Objectives

DNR Wastewater
Program Overview

Septage Program
Overview

Septage Land Application
Requirements

DNR
Wastewater
Program
Vision

“We protect and restore Wisconsin’s water and environmental quality by using regulations, best available science, and public responsibility to prevent and control the discharge of wastewater pollutants.”

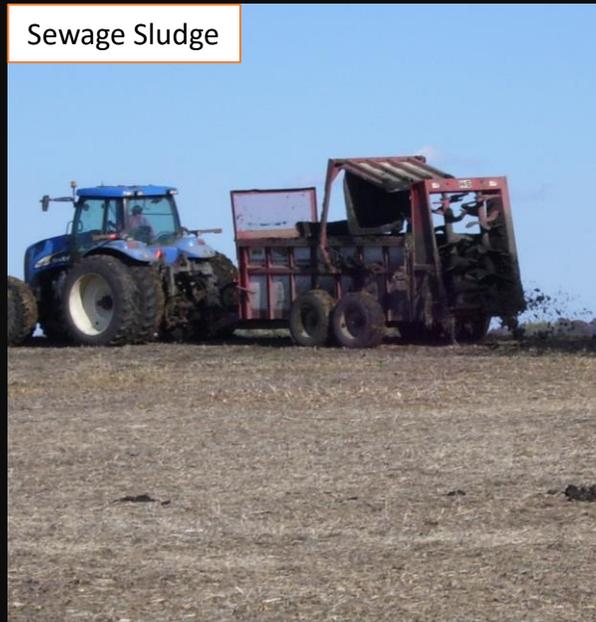
The Wastewater Program allows the conditional discharge of wastes through

Wisconsin Pollutant Discharge Elimination System (WPDES) permits (~3,600 individual and general permits)

Wisconsin septage licenses (~380 licenses)

Wastewater Program regulates the land application of...

- Septage (NR 113)
- Sewage Sludge (NR 204)
- Industrial Wastes (NR 214)
 - Industrial liquid wastes
 - By-product solids
 - Industrial sludges



State Regulations Derive from Federal Regulations

- **40 CFR 503 Regulations**

- Includes metal monitoring/limitations, Pathogen Control, Vector Attraction Reduction
- NR 204: Municipal POTW sewage sludge (EPA delegated program)
- NR 113: Septage (exemption for metals)

- **40 CFR 257/258 Regulations**

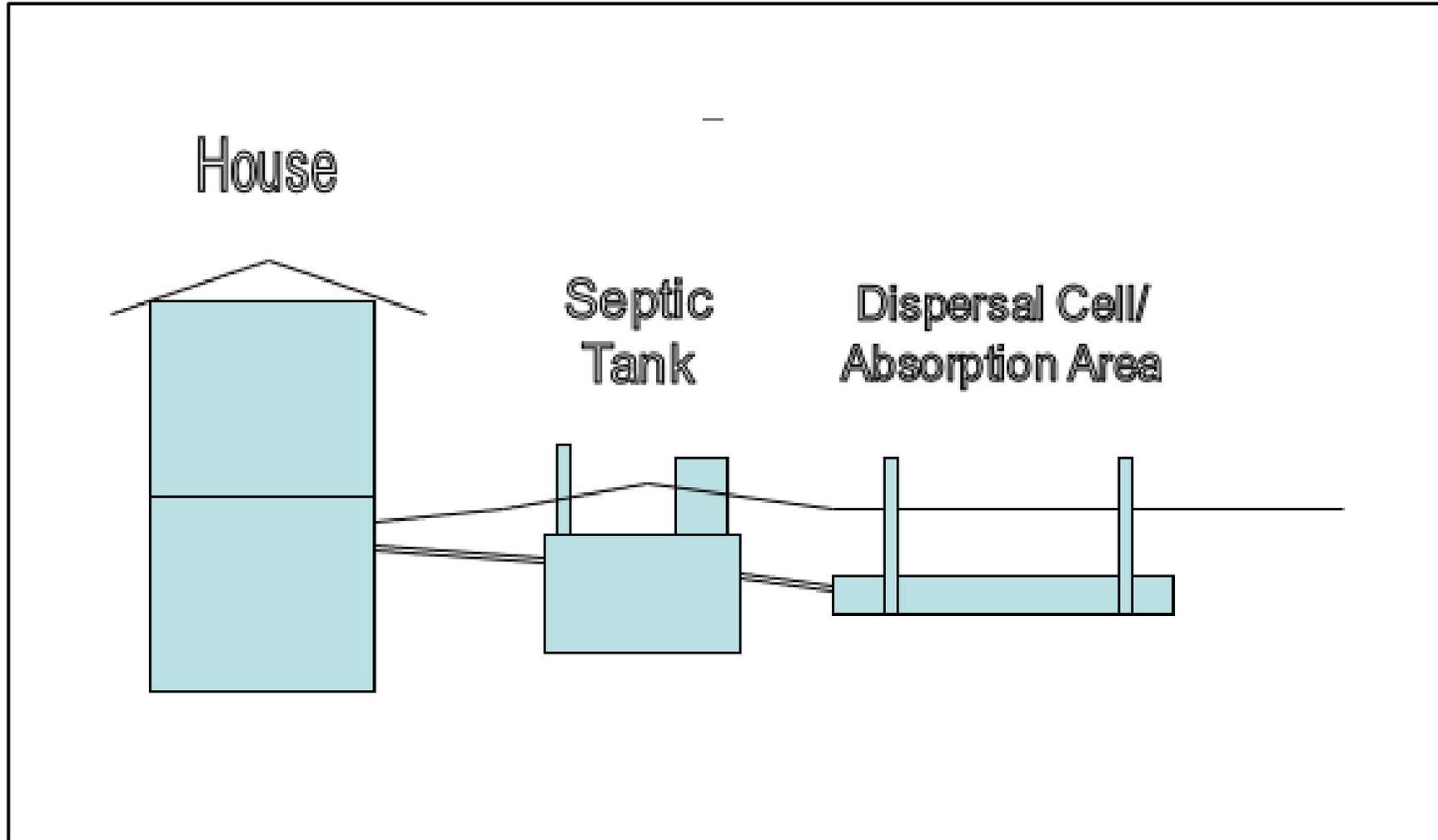
- NR 214: Industrial wastes
- NR 518: Solid waste



DNR Septage Program
NR 113/NR 114

What is septage?

Defined under sub. NR 113.03(55)



Septage Servicing Requirements

1. Apply for septage business license
2. Designate operator-in-charge (OIC)
3. Identify certified operators
4. Register servicing vehicles
5. Renew license every 2 years

Septage Operator-in Charge (OIC)

- OIC = master operator directly responsible for day-to-day business operations.

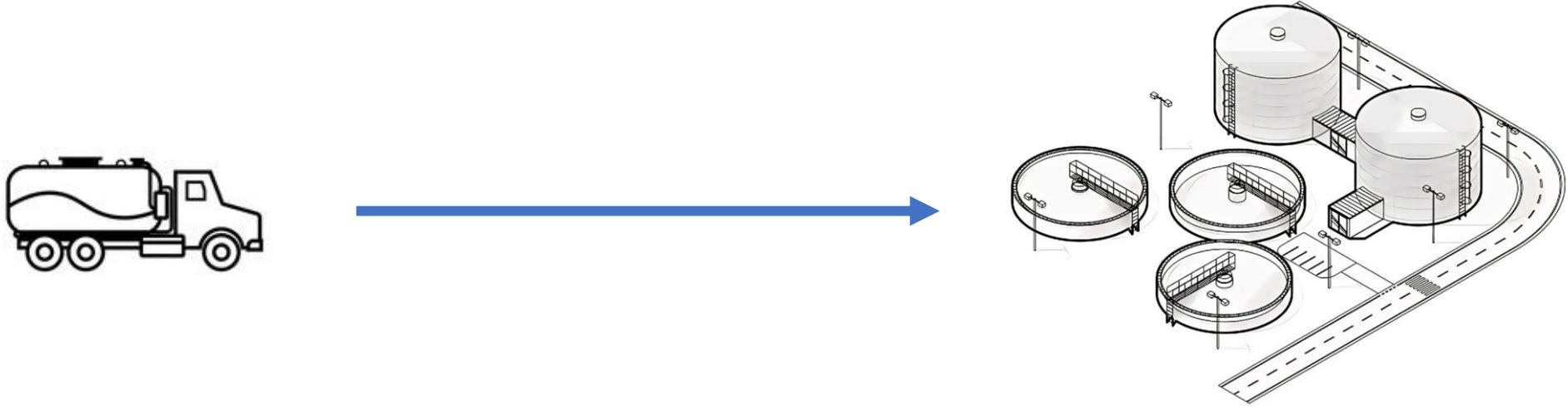
To become a master operator (MO)...

- Pass two exams (operator and master operator)
- Type of exam (“T” or “L”) determines disposal options
- Accumulate 1600 hours of relevant work experience under existing OIC.

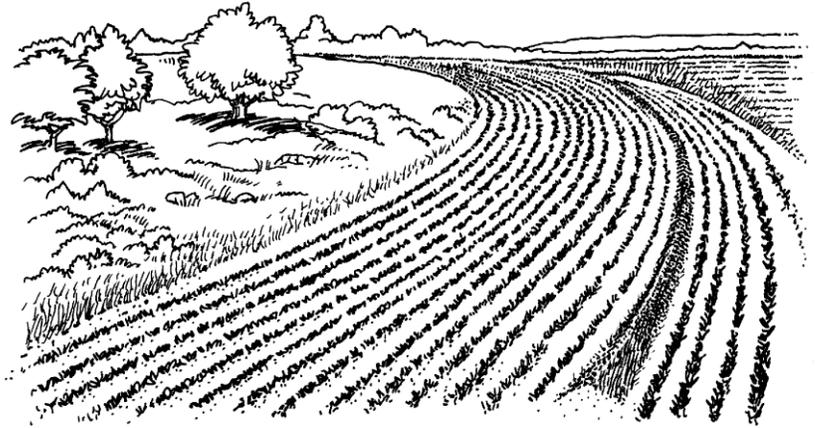
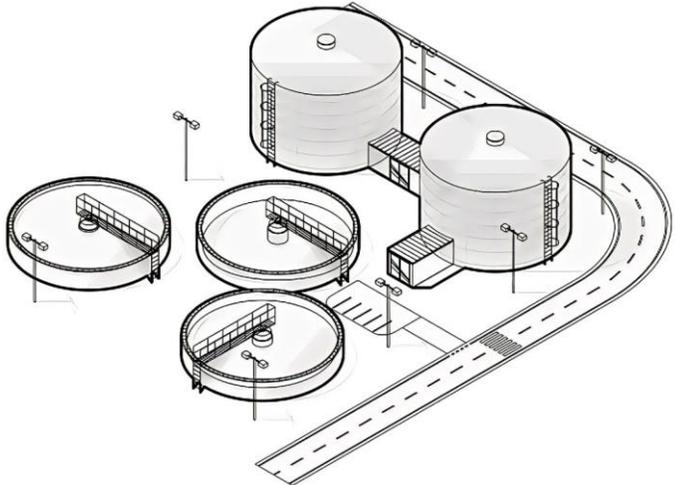
After MO designation...

- 18 continuing education credits (including 3 compliance credits) every 3 years.

Septage Disposal Options (Grade T Operator)



Septage Disposal Options (Grade L Operator)



Why Land Application?

- Beneficial reuse of waste
 - Fertilizer (N, P, K, micronutrients)
 - Soil conditioner (carbon, pH)
- Economical organic fertilizer for farmer
- Economical disposal/reuse option





Land application sites are reviewed and approved prior to spreading.

- Protect public health
- Protect waters of state (surface and groundwater)



Spreading Method(s)



Field Limitations

- Soil suitability
- Setbacks
- Crop limitations



Fields must be approved prior to land application, and are evaluated based on several factors...

- **Bedrock depth $\geq 36''$**
- **Groundwater depth $\geq 36''$**
- **Permeability soil $\leq 6''$**
- **Available water holding capacity $> 5''$**
(within top 60'' of soil profile)
- **Slope**
 - 0-6% Surface application
 - 6-12% Injection/Incorporation only
 - $> 12\%$ restricted
- **Consider soil erosion** (soils with severe erosion are restricted).
- **Winter restrictions** (limited to holding tanks and/or emergency septic situations)
- **Setbacks**
 - Residences (max 500ft)
 - Private wells (250 ft)
 - Community wells (1,000 ft)
 - Recreational areas (max 500ft)
 - Waterways and wetlands (100-200ft)
 - Dry runs and grassed waterways (25-100ft)
 - Property line (max 50 ft)

Addl. Septage Land Application Requirements...

- Log daily activities
- Weekly hydraulic rate: 13,000 gal/ac
- Yearly rate: 39,000 gal/ac
 - 100 lbs Nitrogen/acre
 - May increase rate...but additional requirements
- Account for additional sources of nitrogen



Addl. Septage Land Application Requirements...

- Pathogen Reduction and Vector Attraction Reduction
 - Food crop limitations
 - Public access limitations
 - Treatment
 - Alkali adjustment (pH 12.0 su >30 min.)
 - Barrier
 - Injection
 - Incorporation (within 6 hours)
- Litter control



LAND APPLICATION APPROVAL FORM

SECTION 283.31, 283.41 or 281.48, WIS. STATS Form 3400-122 Rev.6-96

State of Wisconsin Department of Natural Resources

Date: 07/14/1998

Page 1 of 1

Here is a list of new land application sites approved for your use:

Permittee/Licensee: COLLINS SANITARY INC W9235 County Highway B Clinton WI 53525				WPDES Number: WI-0063347	FID: 154147070					
DNR #	Site#/Field#	Site Owner	Legal Description	Village	County	Denied/ Approved	Apprvd Acreage	Approved Application Rates (Gal/acre/day)		Wisc. Adm. Code
								Summer *	Winter *	
* 42382	COLLINS / M1	Collins Farms Inc	S1/2NW1/4NW1/4 S31 T1 R14E	T of Clinton	Rock	Approved	6.8	-----	0	214

**Approved
Acres**

DNR #

**Discharge
Limitations**

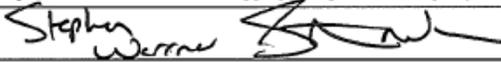
For Application of: Industrial WW, Septage

Conditions: Application is not allowed in the cross hatched areas marked on the attached map. Avoid all drainageways that would carry rain and runoff off the site. No application is allowed during periods of saturated soil conditions. There are areas on this site with slopes greater than 6%. Injection or incorporation is required on all moderate to severely eroded slopes. Stay off slopes greater than 12%. There are several residences around this site. Be sure to meet all separation distances to homes and wells (500', 250' with permission and incorporation). This site has wetland or surface waters nearby; be sure to observe all separation distances to surface waters, and use good management practices to prevent waste runoff and soil erosion. There must be at least 36" between the surface and bedrock/groundwater. This site is not approved for winter spreading.

* site split into 6 fields -> See DNR # 106922-26 @

* If the application rate fields are left blank, follow the nitrogen application rates based on the soil test recommendations.

This approval is subject to the conditions in the Wisconsin Administrative Code and any specific conditions listed above. Failure to comply with the conditions of this approval may result in revocation and shall be grounds for referral for a violation of s. 283.31, s. 283.41 or s. 281.48, Wis. Stats. The Department had not determined whether the approved sites are in government sponsored agricultural programs (i.e., CRP, ACR, etc.), or whether they are subject to any local ordinances. The permittee should contact the appropriate government agency to determine whether any additional restrictions or penalties apply.

Approved By: Updated on 2/26/15 by Stephen Werner  Telephone Number 920-387-7870



Permittee: RCRE
 DNR#: 70353 Site-field: DJA-001

Legend

- Permitted Fields
- Restricted Areas
- Drainageways
- Wells
- HYDRO_FLOW_SCR**
- Intermittent Stream
- Parental Stream
- Waterbody
- Wetlands

Site Information

Property Owner: D. Jellinek
 DNR #: 70353
 Site-Field Name: DJA-001
 Total Acres Approved: 49.5
 Winter Acres Approved: 0.0

DNR #: NA
 Site-Field Name: NA
 Total Acres Approved: NA
 Winter Acres Approved: 0.0

DNR #: NA
 Site-Field Name: NA
 Total Acres Approved: NA
 Winter Acres Approved: 0.0

DNR #: NA
 Site-Field Name: NA
 Total Acres Approved: NA
 Winter Acres Approved: 0.0

Approved By: Date:



DNR #

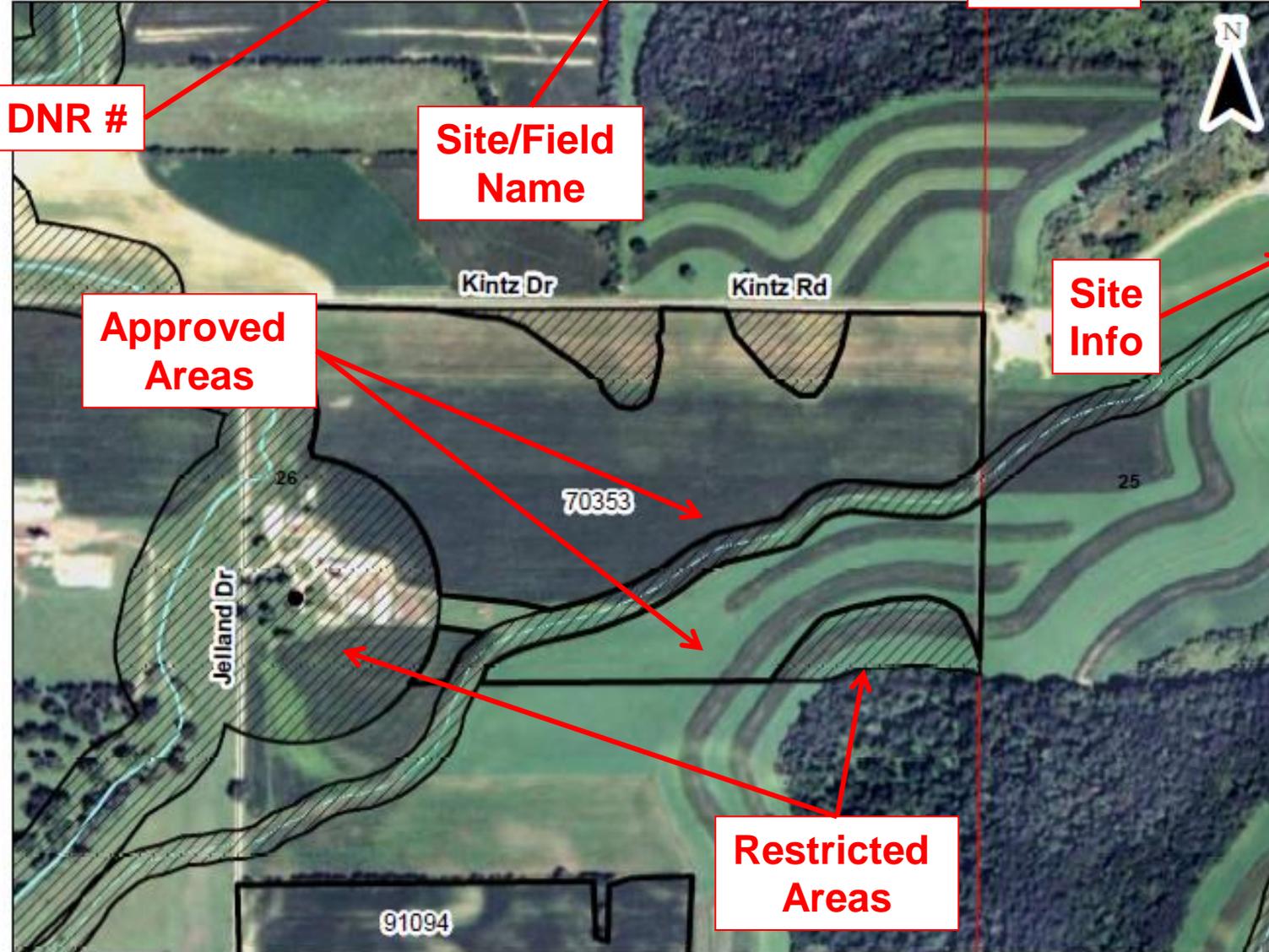
Site/Field Name

Facility Name

Approved Areas

Site Info

Restricted Areas

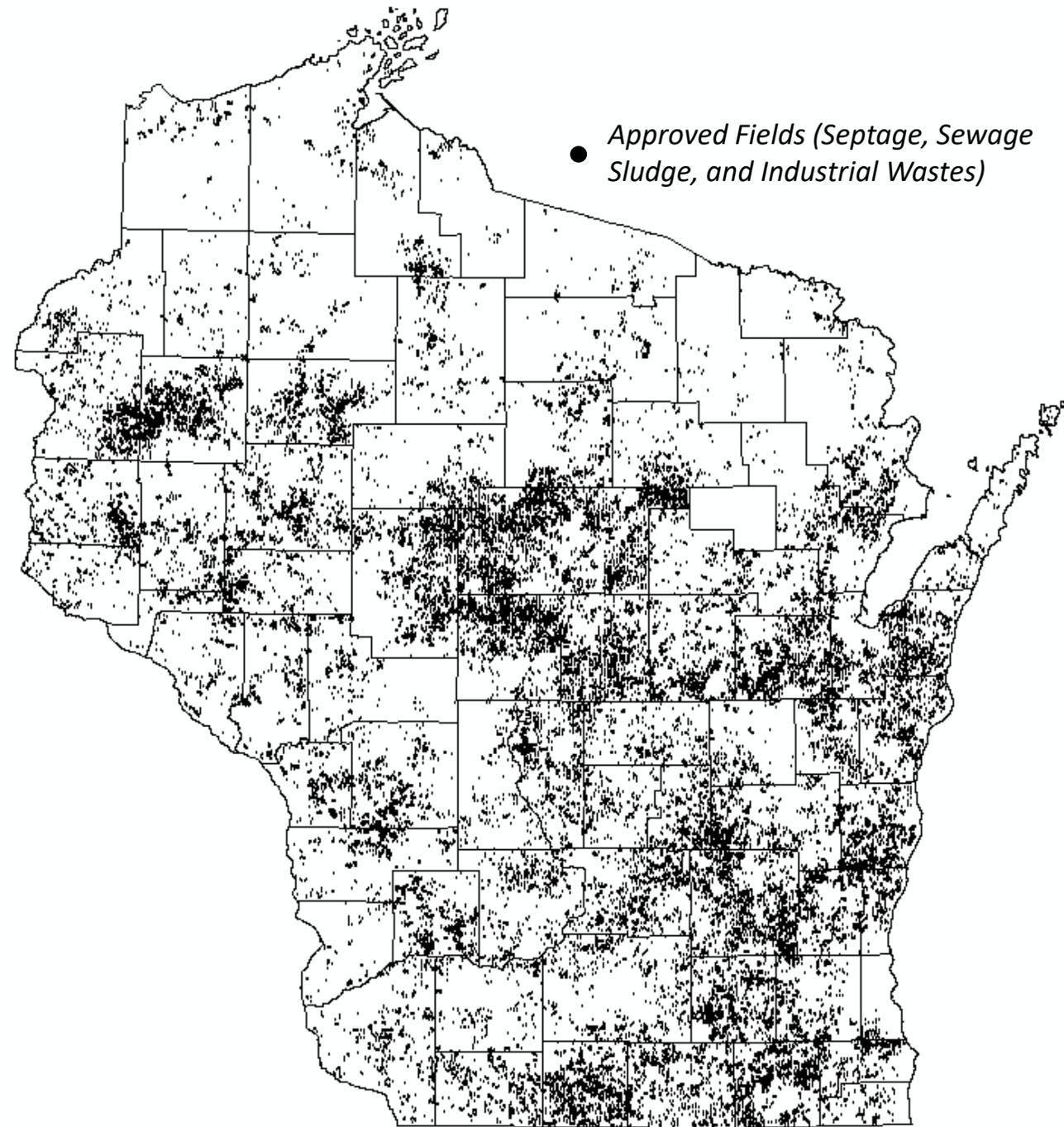


DISCLAIMER: This map is a user generated static output from the Wisconsin Department of Natural Resources. The contents herein are for reference purposes only and may or may not be accurate, current, or otherwise reliable. No liability is assumed for the data delineated herein either expressed or implied by the Wisconsin DNR or its employees. All land application must meet NR 113, NR 204, and NR 214 Wis. Adm. Code.

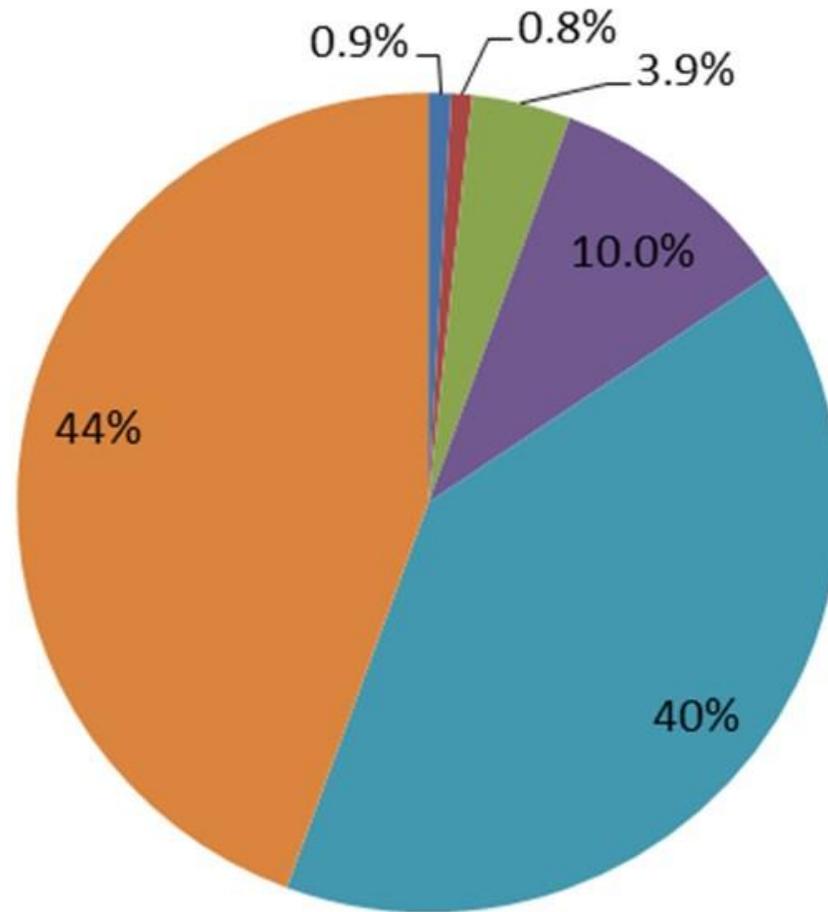
Data-July 2022

Waste Type	Approved Fields	Approved Acreage
Septage	5,718	132,929
Sewage Sludge	14,940	340,690
Industrial	24,927	747,423
TOTAL	45,585	1,221,042*

**Septage, sewage sludge, and industrial wastes
landspread on ~500,000 acres/year (or ~5%
harvested cropland in Wisconsin).*



Wisconsin Harvested Agricultural Acres by Waste Type



**Wisconsin Agricultural
% Harvested Croplands
Total~9 Million Acres**

- Septage
- Biosolids
- Industrial Wastes
- CAFO Wastes
- Other Animal Waste
- Comm Fert Only